



City of Concord Water Resources Department – Wastewater Division

Wastewater Collection System Performance Annual Report

Fiscal Year July 2015 – June 2016

I. General Information

System Name: City of Concord Wastewater Collection System

Responsible Entity: City of Concord

Persons in Charge: Christie Putnam
Director of Water Resources

Mark Varnadore
Wastewater Utility Services Superintendent & System Operator

Applicable Permits: WQCS00326
Tributary to NC0036269 and NC0081621

Description of the System:

The City of Concord Wastewater Collection System consists of over 544 miles of sewer pipelines, approximately 13,601 manholes, and 24 wastewater pump stations. The system came into existence in the early 1900s and continued to be upgraded and extended to become the system we operate today.

II. Performance

The City of Concord's Wastewater Division performs the operation and maintenance of the City's collection system, which serves approximately 32,534 customers. Eleven crews provide this service. Two rapid-response crews respond to all calls related to potential blockages and overflows in the system. Two jet-vac truck crews perform maintenance on the system by removing obstructions that may be present in the system,

thus limiting the number of possible back-ups and overflows. These trucks are also used to maintain the City's 24 wastewater pump stations through periodic cleaning and sludge removal. An inflow-infiltration crew locates defects and obstructions in the pipelines by the use of a camera that videotapes the inside of the sewers. The City also has a crew that is dedicated to the operation and maintenance of the City's wastewater pump stations. One service line installation and repair crew installs new service connections to the City's sewer mains and repairs sewer mains as well as manholes. One crew is dedicated to conducting smoke tests on the sewer system, along with GPS work. One crew is dedicated to the installation of new sewer lines and the replacement of aged and deteriorated sewer lines. A right-of-way maintenance crew collects data on the location of the various components of the City's system, provides maintenance of the wastewater collection system's rights-of-way, and performs semi-annual inspections of the system. The City has a System Protection Superintendent who is responsible for the implementation of the Fats, Oil, and Grease Program (FOG), along with the inspection of sewer right-of-ways to ensure easement accessibility.

During the past fiscal year, the City of Concord was requested to investigate approximately 317 reports of possible sewer-related overflows. These calls were related to both municipal and private lines. The City of Concord had 0 incidence that resulted in the spill or overflow of more than 1,000 gallons of wastewater to surface waters of the State.

October 2015

Total +/- 450 gallons to waters of the State

176 Georgia Street SW (450-gallon spill)

This spill occurred as a result of the manhole bottom failed allowing sewer to run into a storm drain which leads to small tributary to Irish Buffalo Creek. There were no known environmental impacts as a result from this spill.

May 2016

Total +/- 120 gallons to waters of the State

1012 Meadowbrook Lane SW (120-gallon spill)

This spill occurred as a result of grease and debris being discharged in the sewer system allowing sewer to flow into a tributary to Coddle Creek. There were no known environmental impacts as a result from this spill.

May 2016

Total +/- 0 gallons to waters of the State

9859 Flower Bonnet Avenue NW (2,730-gallon spill)

This spill occurred as a result of grease and debris being discharged into the sewer system. The affected pipe has been cleaned and all grease and debris removed. There were no known environmental impacts as a result of

May 2016

Total +/- 270 gallons to waters of the State

176 Georgia Street SW (540-gallon spill)

This spill occurred as a result of the manhole bottom failed allowing sewer to run into a storm drain which leads to small tributary to Irish Buffalo Creek. There were no known environmental impacts as a result from this spill.

May 2016

Total +/- 360 gallons to waters of the State

829 Courtney Street SE (3600-gallon spill)

This spill occurred as a result of roots growing into the sewer system. The affected pipe has been cleaned and all roots and debris removed. There were no known environmental impacts as a result from this spill.

The Wastewater Division began a program in FY '06-'07 to make property owners aware of water and sewer easements on their property. The purpose of this program is to initiate corrective actions to existing accessibility problems and prevent future accessibility problems. Easements are not always identified on property deeds. The first step to ensure access to the water and sewer system is to confirm that the property owner is aware of the City's easements so they can plan or modify the use of their property accordingly. Notification letters include the specific reference to a recorded easement or subdivision plat that affects the owner's property. To date, the City of Concord has distributed easement notification letters for sewer and raw water easement notification letters to customers, including information about the City's requirements for keeping the easement accessible. Easement research and notifications for the City's utility service area have been completed. Properties with sewer easements are flagged in the City's customer database so new owners can be notified when property ownership is transferred. Letters have been mailed as a result of property transfers. Property owners have responded to the letters with request for additional information concerning easement location.

The System Protection Superintendent oversees the department's FOG (Fats, Oils and Grease) program. The officer reviews plans for new construction and up-fit plans dealing with food preparation and grease disposal. Monthly pumper hauler routing reports and individual food service facility pumping manifests are two items that are used to monitor grease disposal from the food service industry. City crews assist the System Protection Program by providing information pertaining to grease buildups noticed during daily maintenance operations. Information gleaned from the crews is used to provide educational information to the areas or establishments that are contributing to the problem. The System Protection Program also has an extensive educational program, providing grease related programs to 1st grade, 3rd grade, 6th grade students, Journey Through Concord and Concord 101 adult education programs.

The City of Concord is continually performing preventative maintenance activities and undergoing rehabilitation projects to prevent sanitary sewer overflows. The following activities have been completed during the past fiscal year.

Jet-Vac Line Cleaning	464,640	linear feet
Dye Testing	189	
Sewer Service Inspections	672	
Sewer Line Replacements	10,718	linear feet
Smoke Testing	50,318	linear feet
T.V. Inspections	51,959	linear feet
Pipe Lining	10,718	linear feet
Manholes Rehabilitated	43	

The City of Concord also operates an in-house flow monitoring program. The desired outcomes of this program are to ensure adequate system capacity, prevent sanitary sewer overflows, identify segments of the system impacted by inflow and infiltration, and prioritize field investigations and repairs that could create the greatest reduction in the conveyance and treatment of unnecessary flow. Over the past year, the following basins were studied:

- Irish Buffalo Creek basins: IBCC1800 NE, IBCC1200 NE and IBCC0700 NE.
- Stricker Branch basin: STBC0050 NE.
- Three Mile Branch basin: Entire Basin.

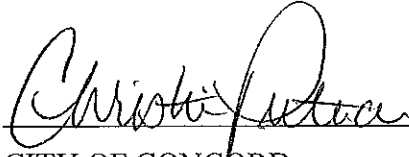
These meters were installed as a follow-up to the cure in place pipe lining work that was done the past year for I&I reduction.

III. Notification

Customers of the City of Concord's wastewater collection system were notified regarding the availability of this annual report through a public notice in the *Independent Tribune*, a local daily newspaper. A copy of this report is available for review at the Alfred M. Brown Operations Center at 850 Warren C. Coleman Boulevard, Concord, North Carolina; at City Hall, 35 Cabarrus Ave W, Concord, North Carolina; and on the City of Concord's website at www.concordnc.gov.

IV. Certification

I certify under penalty of law that this report is complete and accurate to the best of my knowledge. I further certify that this report has been made available to the users or customers of the named system and that those users have been notified of its availability.



Date: 8.18.16

CITY OF CONCORD

Christie Putnam, Director of Water Resources



The City of Concord has completed its 2015-2016 Wastewater Collection System Performance Annual Report as required by the Clean Water Act of 1999, House Bill 1160. It is available for review at the Alfred M. Brown Operation Center, 850 Warren C. Coleman Boulevard, Concord, North Carolina and the City of Concord City Hall, 35 Cabarrus Ave. W Concord, North Carolina. A copy is also available on the City's website at www.concordnc.gov

ADVERTISE ONCE

Wednesday, September 2, 2015

In the "Independent Tribune", as a block advertisement.
Please use smallest print available

FAX Proof to: Kim Deason, City Clerk
Fax # 704-786-7068